

In the claims:

For the convenience of the Examiner, all claims being examined, whether or not amended, are presented below.

1. **(Original)** A recombinant nucleic acid encoding a CAB domain, comprising a portion of calcineurin A and a portion of calcineurin B, wherein the CAB domain forms a tripartite complex with an FKBP/CAB ligand and an FKBP domain.
2. **(Currently amended)** The recombinant nucleic acid of claim 1 wherein the calcineurin A portion of the CAB domain comprises a peptide sequence selected from any of the following peptide sequences: residues 12-394 of human calcineurin A, residues 12-370 of human calcineurin A or residues 340-394 of human calcineurin A (with reference to the peptide sequence provided in SEQ ID NO: 33 ~~encoded by accession number M29550~~).
3. **(Currently amended)** The recombinant nucleic acid of claim 1 wherein the calcineurin B portion of the CAB domain comprises residues 3-170 of human calcineurin B (with reference to the peptide sequence provided in SEQ ID NO: 35 ~~encoded by accession number M30773~~).
4. **(Original)** The recombinant nucleic acid of claim 1, 2, or 3 comprising a nucleic acid sequence encoding a calcineurin A and/or calcineurin B peptide sequence which differs from a naturally occurring calcineurin peptide sequence by up to ten amino acid substitutions, deletions or insertions.
5. **(Original)** A recombinant nucleic acid encoding a fusion protein comprising at least one CAB domain of claim 1 and at least one additional domain that is heterologous thereto.
6. **(Original)** The recombinant nucleic acid of claim 5 wherein the heterologous domain is selected from the group comprising a DNA binding domain, a transcription regulatory domain, a cellular localizing domain and a signaling domain.
7. **(Original)** The recombinant nucleic acid of claim 6 wherein the heterologous domain is or is derived from a lexA, GAL4 or composite DNA binding domain.
8. **(Original)** The recombinant nucleic acid of claim 6 wherein the heterologous domain is or is derived from a p65, VP16 or AP domain.

9. **(Original)** The recombinant nucleic acid of claim 6 wherein the heterologous domain is or is derived from a KRAB domain or a ssn-6/TUP-1 domain.
10. **(Original)** The recombinant nucleic acid of claim 6 wherein the heterologous domain is or is derived from an intracellular domain of a cell surface receptor.
11. **(Original)** A recombinant nucleic acid encoding a fusion protein containing one or more CAB domains which form a tripartite complex with an FKBP domain-containing protein and a non naturally occurring FKBP/CAB ligand preferentially over FK506.
12. **(Currently amended)** A nucleic acid composition, comprising a first recombinant nucleic acid of any of ~~claim 5-11~~ claims 5, 6, 7, 8, 9, 10 or 11 further comprising a second recombinant nucleic acid encoding a fusion protein comprising at least one FKBP domain and at least one additional domain that is heterologous thereto.
13. **(Original)** A nucleic acid composition of claim 12 wherein the second nucleic acid encodes a fusion protein containing a heterologous domain that is the same or different from the heterologous domain on the first fusion protein.
14. **(Original)** The nucleic acid composition of claim 13 wherein the first fusion protein comprises a CAB domain and a transcription activation domain and the second fusion protein comprises an FKBP domain and a DNA binding domain.
15. **(Original)** The nucleic acid composition of claim 13 wherein the first fusion protein comprises a CAB domain and a DNA binding domain and the second fusion protein comprises an FKBP domain and a transcription activation domain.
16. **(Original)** A nucleic acid composition of claim 12 wherein the first and second fusion proteins form a ligand dependent complex in the presence of ligand, and wherein the complex initiates a detectable biological signal.
17. **(Original)** The nucleic acid composition of claim 16 wherein the biological signal is selected from the group comprising transcription, cell proliferation, cell differentiation, apoptosis.

18. **(Original)** The nucleic acid composition of claim 12 wherein the composition further comprises a target gene construct.
19. **(Cancelled)**
20. **(Original)** A vector comprising a recombinant nucleic acid of any of claim 1-3 or 5-11.
21. **(Original)** A vector comprising a recombinant nucleic acid of claim 4.
22. **(Original)** A vector comprising a nucleic acid composition of claim 12.
23. **(Original)** The vector of claim 20 wherein the vector is a viral vector.
24. **(Original)** A vector of claim 22 wherein the vector is a viral vector.
25. **(Original)** The vector of claim 23 or 24 wherein the viral vector is selected from the group consisting of adenovirus, AAV, herpesvirus, retrovirus, hybrid adenovirus/AAV, poxvirus, lentivirus.
26. **(Original)** A host cell comprising a recombinant nucleic acid of any of claim 1-3 or 5-11.
27. **(Original)** A host cell comprising a nucleic acid composition of claim 12.
28. **(Previously presented)** A host cell of claim 26 which is an isolated cell of human origin.
29. **(Currently amended)** An isolated cell of human origin which comprises a host cell of claim 27 which is an isolated cell and of human origin.
30. **(Currently amended)** A host cell of claim 26 which is encapsulated ex vivo within a biocompatible material.
31. **(Currently amended)** A host cell of claim 27 which is encapsulated ex vivo within a biocompatible material.
32. **(Original)** A non-human animal containing host cells of claim 26.
33. **(Original)** A non-human animal containing host cells of claim 27.

34. **(Original)** A method for producing genetically engineered host cells comprising introducing into the cells a recombinant nucleic acid of any of claims 1-3 or 5-11 under conditions permitting DNA uptake by cells.

35. **(Currently amended)** A method for producing genetically engineered host cells comprising introducing into the cells the nucleic acid composition of claim 12 ~~compositions [] of claim [] 12[]~~ under conditions permitting DNA uptake by cells.

36. **(Original)** The method of claim 34 wherein the nucleic acids are introduced ex vivo.

37. **(Original)** The method of claim 35 wherein the nucleic acids are introduced ex vivo.

38-50. **(Cancelled)**

51. **(Currently amended)** A method for producing genetically engineered host cells comprising introducing into the cells the nucleic acid compositions of any of claims ~~13-18~~ 13, 14, 15, 16, 17, or 18 under conditions permitting DNA uptake by cells.